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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Manoharan et al.

Serial No.: 09/970,971

Group Art Unit: Not yet assigned

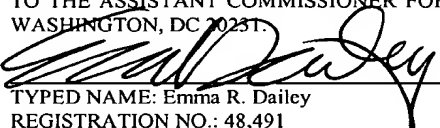
Filing Date: October 4, 2001

Examiner: Not yet assigned

For: OLIGONUCLEOTIDES HAVING A-DNA FORM AND B-DNA FORM  
CONFORMATIONAL GEOMETRY

DATE OF DEPOSIT: December 17, 2001

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TYPED NAME: Emma R. Dailey  
REGISTRATION NO.: 48,491

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R. §§1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 C.F.R. §1.56(b).



In accordance with §1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of the above identified application as set forth in §1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first office action after the filing of request for continued examination under §1.114, no additional fee is required.

- ☐ In accordance with §1.129(a), this Information Disclosure Statement is being filed in connection with ☐the first or ☐second After Final Submission, therefore:
- ☐ Certification in Accordance with §1.97(e) is attached; or
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- ☐ In accordance with §1.97(c), this Information Disclosure Statement is being filed after the period set forth in §1.97(b) above but before the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311, or before an action that otherwise closes prosecution in the application, therefore:
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- ☐ In accordance with §1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with §1.97(e); and the submission fee of \$180.00 as set forth in §1.17(p).
- ☐ Copies of each of the references listed on the attached Form PTO-1449 are enclosed herewith.
- ☒ Copies of references listed on the attached Form PTO-1449 are enclosed herewith EXCEPT THAT:
- ☒ In view of the voluminous nature of references **ES-EV**, and the likelihood that these references were available to the Examiner, copies were not enclosed with the Information Disclosure Statement filed in Serial No. 09/303,586.

☒ In accordance with §1.98(d), copies of the following references listed on the attached Form PTO-1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C. §120 have been made in the instant application:

☒ Copies of references **AA-EV, GT-HO, IR-JC and JG** listed on the attached Form PTO-1449 were previously cited by or submitted to the Patent and Trademark Office in prior application Serial No. 09/303,586, filed May 3, 1999. Copies of references **EW-GS, HP-IQ and JI** were previously cited by or submitted to the Patent and Trademark Office in prior application Serial No. 08/936,166, filed September 23, 1997, now U.S. Patent No. 6,307,040.

☒ If any of the foregoing publications are not available to the Examiner, Applicant will endeavor to supply copies at the Examiner's request.

Copies of newly cited references **JD-JF, JH and JJ** are enclosed herewith.

Serial No. 08/837,201 filed April 14, 1997; Serial No. 09/044,506 filed March 19, 1998 and Serial No. 09/062,416 filed April 17, 1998, were previously cited in the parent application Serial No. 09/303,586 filed May 3, 1999, and have now issued as U.S. Patent Nos. **5,985,558 (JD), 5,955,443 (JE) and 6,111,094 (JF)**, respectively.

Prior application Serial No. 08/936,166 filed September 23, 1997 is now U.S. Patent No. **6,307,040 (JJ)**.

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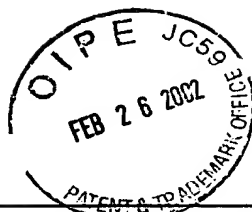
English language abstracts were provided for those listed references which are not in the English language.

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A handwritten signature in black ink, appearing to read "Emma R. Dailey", written over a horizontal line.

Emma R. Dailey  
Registration No. 48,491

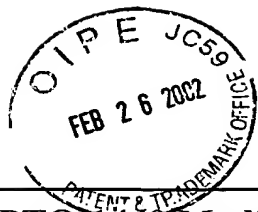
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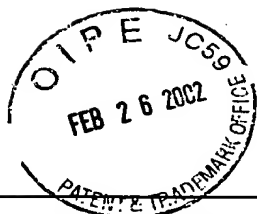
<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. <b>ISIS-4789</b>	Serial No. <b>09/970,971</b>
		Applicant <b>Manoharan et al.</b>	
		Filing Date <b>October 4, 2001</b>	Group <b>Not yet assigned</b>
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
	<b>AA</b>	Abe, A. et al., "Conformational Energies and the Random-Coil Dimensions and Dipole Moments of Polyoxides CH <sub>3</sub> O[(CH <sub>2</sub> ) <sub>y</sub> O] <sub>x</sub> CH <sub>3</sub> ," <i>J. Am. Chem. Soc.</i> , <b>1976</b> , 6468-6476	
	<b>AB</b>	Albert, P.R. et al., "Antisense knockouts: molecular scalpels for the dissection of signal transduction", <i>Trends Pharmacol. Sci.</i> , <b>1994</b> , 15, 250-254	
	<b>AC</b>	Altmann, K. et al., "Second Generation Antisense Oligonucleotides-Inhibition of Pkc-1 And c-RAF Kinase Expression by Chimeric Oligonucleotides Incorporating 6-Substituted Carbocyclic Nucleosides and 2'-O-Ethylene Glycol Substituted Ribonucleosides," <i>Nucleosides &amp; Nucleotides</i> , <b>1997</b> , 16(7-9), 917-926	
	<b>AD</b>	Altmann, K. et al., "Second-Generation Antisense Oligonucleotides: Structure-Activity Relationships and the Design of Improved Signal-Transduction Inhibitors", <i>Biochem. Soc. Trans.</i> , <b>1996</b> , 24, 630-637	
	<b>AE</b>	Altmann, K. et al., "Second Generation of Antisense Oligonucleotides: From Nuclease Resistance to Biological Efficacy in Animals," <i>Chimia</i> , <b>1996</b> , 50, 168-176	
	<b>AF</b>	Baker, B.F. et al., "2'-O-(2-Methoxy)ethyl-modified Anti-intercellular Adhesion Molecule 1 (ICAM-1) Oligonucleotides Selectively Increase the ICAM-1 Translation Initiation Complex in Human Umbilical Vein Endothelial Cells", <i>J. Biol. Chem.</i> , <b>1997</b> , 272, 11994-12000	
	<b>AG</b>	Beal, P. A. et al., "Second Structural Motif for Recognition of DNA by Oligonucleotide-Directed Triple-Helix Formation," <i>Science</i> , <b>1991</b> , 251, 1360-1363	
	<b>AH</b>	Beaucage, S.L. et al., "Advances in the Synthesis of Oligonucleotides by the Phosphoramidite Approach", <i>Tetrahedron</i> , <b>1992</b> , 48, 2223-2311	
	<b>AI</b>	Berger et al., "Crystal structures of B-DNA with incorporated 2'-deoxy-2'-fluoro-arabino-furanosyl thymine: implications of conformational preorganization for duplex stability," <i>Nucl. Acids Res.</i> , <b>1998</b> , 26(10), 2473-2480	
	<b>AJ</b>	Berkow et al. (eds.), <i>The Merck Manual of Diagnosis and Therapy</i> , 15th Edition, Rahway, N.J., <b>1987</b> , 2263-2277	
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	<b>AK</b>	Berkow et al. (eds.), <i>The Merck Manual of Diagnosis and Therapy</i> , 15th Edition, Rahway, N.J., <b>1987</b> , 2283-2287	
	<b>AL</b>	Berkow et al. (eds.), <i>The Merck Manual of Diagnosis and Therapy</i> , 15th Edition, Rahway, N.J., <b>1987</b> , 2286-2293	
	<b>AM</b>	Berkow et al. (eds.), <i>The Merck Manual of Diagnosis and Therapy</i> , 15 <sup>th</sup> Edition, Rahway, NJ, <b>1987</b> , 2301-2310	
	<b>AN</b>	Bernhard, E.J. et al., "Direct Evidence Linking Expression of Matrix Metalloproteinase 9 (92-kDa gelatinase/collagenase) to the metastatic phenotype in transformed rat embryo cells," <i>Proc. Natl. Acad. Sci. USA</i> , <b>1994</b> , <i>91</i> , 4293-4297	
	<b>AO</b>	Birkedal-Hansen, H. et al., "Proteolytic Remodeling of Extracellular Matrix," <i>Curr. Op. Cell Biol.</i> , <b>1995</b> , <i>7</i> , 728-735	
	<b>AP</b>	Bock, L. C. et al., "Selection of Single-Stranded DNA Molecules that Bind and Inhibit Human Thrombin," <i>Nature</i> , <b>1992</b> , <i>355</i> , 564-566	
	<b>AQ</b>	Böggemeyer, E. et al., "Borrelia Burgdorferi Upregulates the Adhesion Molecules E-selectin, P-selectin, ICAM-1 and VCAM-1 on Mouse Endothelioma Cells in vitro," <i>Cell Adhes. Commun.</i> , <b>1994</b> , <i>2</i> , 145-157	
	<b>AR</b>	Conte, M. R. "Confirmational Properties and Thermodynamics of the RNA Duplex r(CGCAAUUUGCG)2: Comparison with the DNA Analogue d(CGCAAATTTGCG)2," <i>Nucl. Acids Res.</i> , <b>1997</b> , <i>25(13)</i> , 2627-2634	
	<b>AS</b>	Cornell, W. D. et al., "A Second Generation Force Field for the Simulation of Proteins, Nucleic Acids, and Organic Molecules," <i>J. Am. Chem. Soc.</i> , <b>1995</b> , <i>117</i> , 5179-5197	
	<b>AT</b>	Cory, A.H. et al., "2'-Deoxy-2'-Methylene Derivatives of Adenosine, Guanosine, Tubercidin, Cytidine and Uridine as Inhibitors of L1210 Cell Growth in Culture," <i>Biochem. Pharmacol.</i> , <b>1994</b> , <i>47(2)</i> , 365-371	
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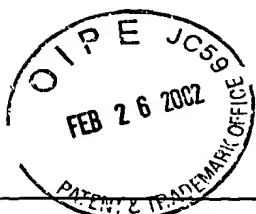


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	<b>AU</b>	Cowser, L. M. et al., "In vitro and In Vivo Activity of Antisense Inhibitors of ras: Potential for Clinical Development," <i>Anti-Cancer Drug Design</i> , <b>1997</b> , <i>12</i> , 359-371	
	<b>AV</b>	Crooke, S.T. et al., "Pharmacokinetic Properties of Several Novel Oligonucleotide Analogs in mice", <i>J. Pharmacol. Exp. Therapeutics</i> , <b>1996</b> , <i>277</i> , 923-937	
	<b>AW</b>	Crooke, S.T. et al., "Kinetic characteristics of <i>Escherichia coli</i> RNase H1: cleavage of various antisense oligonucleotide-RNA duplexes", <i>Biochem. J.</i> , <b>1995</b> , <i>312</i> , 599-608	
	<b>AX</b>	Crooke, S. T. , "Progress in Antisense Therapeutics," <i>Medicinal Research Reviews</i> , <b>1996</b> , <i>16(4)</i> , 319-344	
	<b>AY</b>	Damha, M.J. et al., "An improved procedure for derivatization of controlled-pore glass beads for solid-phase oligonucleotide synthesis", <i>Nucl. Acids Res.</i> , <b>1990</b> , <i>18</i> , 3813-3821	
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	<b>BA</b>	De Mesmaeker, A. et al., "Antisense Oligonucleotides", <i>Acc. Chem. Res.</i> , <b>1995</b> , <i>28</i> , 366-374	
	<b>BB</b>	Dean, N.M. et al., "Inhibition of protein kinase C- $\alpha$ expression in mice after systemic administration of phosphorothioate antisense oligodeoxynucleotides", <i>Proc. Natl. Acad. Sci.</i> , <b>1994</b> , <i>91</i> , 11762-11766	
	<b>BC</b>	DeLisser, H. M. et al., "Molecular and Functional Aspects of PECAM-1/CD31," <i>Immunol. Today</i> , <b>1994</b> , <i>15(10)</i> , 490-494	
	<b>BD</b>	Dimock, S. et al., "An Efficient Multigram Synthesis of Monomers for the Preparation of Novel Oligonucleotides Containing Isosteric Non-Phosphorous Backbones," <i>Nucleosides &amp; Nucleotides</i> , <b>1997</b> , <i>16(7-9)</i> , 1629-1632	
	<b>BE</b>	Downward, J. et al., "The ras Superfamily of Small GTP-binding proteins," <i>TIBS</i> , <b>15</b> , <b>1990</b> , 469-472	
	<b>BF</b>	Egli, M. et al., "RNA Hydration: A Detailed Look," <i>Biochemistry</i> , <b>1996</b> , <i>35</i> , 8489-8494	
	<b>BG</b>	Englisch, U. et al., "Chemically Modified Oligonucleotides as Probes and Inhibitors", <i>Angew. Chem. Int. Ed. Eng.</i> , <b>1991</b> , <i>30</i> , 613-629	
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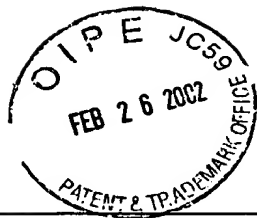


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	<b>BH</b>	Fedoroff, O. Y. et al., "Structure of a DNA: RNA Hybrid Duplex Why Rnase H Does Not Cleave Pure RNA," <i>J. Mol. Biol.</i> , <b>1993</b> , 233, 509-523	
	<b>BI</b>	Flanagan et al., "Cellular penetration and antisense activity by a phenoxazine-substituted heptanucleotide," <i>Nat. Biotechnol.</i> , <b>1999</b> , 17(1), 48-52	
	<b>BJ</b>	Fraser, A. et al., "Synthesis and Conformational Properties of 2'-Deoxy-2'-methylthio-pyrimidine and -purine Nucleosides: Potential Antisense Applications," <i>J. Heterocycl. Chem.</i> , <b>1993</b> , 30, 1277-1287	
	<b>BK</b>	Freier, S.M. et al., "The ups and downs of nucleic acid duplex stability: structure-stability studies on chemically-modified DNA:RNA duplexes", <i>Nucl. Acids Res.</i> , <b>1997</b> , 25, 4429-4443	
	<b>BL</b>	Gaffney, B.L. et al., "A New Strategy for the Protection of Deoxyguanosine During Oligonucleotide Synthesis", <i>Tetrahedron Letts.</i> , <b>1982</b> , 23, 2257-2260	
	<b>BM</b>	Gao, Y-G. et al., "Molecular Structure of a DNA Decamer Containing an Anticancer Nucleoside Arabinosylcytosine: Conformational Perturbation by Arabinosylcytosine in B-DNA," <i>Biochem.</i> , <b>1991</b> , 30(41), 9922-9931	
	<b>BN</b>	Gmeiner, W.H. et al., "Effect of Cytarabine on the NMR Structure of a Model Okazaki Fragment from the SV40 Genome," <i>Biochem.</i> , <b>1999</b> , 38, 1166-1175	
	<b>BO</b>	Gonzalez, C. et al., "Structure and Dynamics of a DNA-RNA Hybrid Duplex with a Chiral Phosphorothioate Moiety: NMR and Molecular Dynamics with Conventional and Time-Averaged Restraints," <i>Biochemistry</i> , <b>1995</b> , 34, 4969-4982	
	<b>BP</b>	Gotfredsen, C.H. et al., "Novel Oligodeoxynucleotide Analogues Containing A 2'-O-Methylarabinonucleoside," <i>Tetra. Lett.</i> , <b>1994</b> , 35(37), 6941-6944	
	<b>BQ</b>	Gotfredsen, C.H. et al., "Synthesis and Properties of $\alpha$ - and $\beta$ -Oligodeoxynucleotides Containing $\alpha$ - and $\beta$ -1-(2-O-Methyl-D-arabino-furanosyl)thymine," <i>Bioorg. Med. Chem.</i> , <b>1996</b> , 4(8), 1217-1225	
	<b>BR</b>	Gotfredsen, C.H. et al., "Structure of a DNA Duplex Containing a Single 2'-O-Methyl- $\beta$ -D-araT: Combined Use of NMR, Restrained Molecular Dynamics, and Full Relaxation Matrix Refinement," <i>Bioconjugate Chem.</i> , <b>1996</b> , 7, 680-688	
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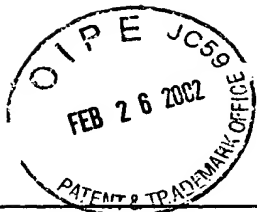




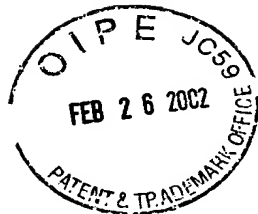
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	<b>BS</b>	Griffin, L. C. et al., "In Vivo Anticoagulant Properties of a Novel Nucleotide-Based Thrombin Inhibitor and Demonstration of Regional Anticoagulation in Extracorporeal Circuits," <i>Blood</i> , 1993, 81, 3271-3276	
	<b>BT</b>	Griffiths, C.E.M. et al., "Keratinocyte Intercellular Adhesion Molecule-1 (ICAM-1) Expression Precedes Derman T Lymphocyte Infiltration in Allergic Contact Dermatitis ( <i>Rhus dermatitis</i> )", <i>Am. J. Pathology.</i> , 1989, 135, 1045-1053	
	<b>BU</b>	Gum, R. et al., "Stimulation of 92-kDa Gelatinase B Promoter Activity by ras Is Mitogen-activated Protein Kinase Kinase 1-independent and Requires Multiple Transcription Factor Binding Sites Including Closely Spaced PEA3/ets and AP-1 Sequences," <i>J. Biol. Chem.</i> , 1996, 271(18), 10672-10680	
	<b>BV</b>	Guzaev A. et al., "Synthesis of C-Radiolabeled Oligonucleotides with a Novel Phosphoramidite Reagent," <i>Bioorg. &amp; Med. Chem. Lett.</i> , 1998, 8, 1123-1126	
	<b>BW</b>	Hakugawa, J. et al., "The Inhibitory Effect of Anti-Adhesion Molecule Antibodies on Eosinophil Infiltration in Cutaneous Late Phase Response in Balb/c Mice Sensitized with Ovalbumin (OVA)," <i>J. Dermatol.</i> , 1997, 24, 73-79	
	<b>BX</b>	Hansske, F. et al., "2' and 3'-Ketonucleosides and their <i>Arabino</i> and <i>Xylo</i> Reduction Products", <i>Tetrahedron</i> , 1984, 40, 125-135	
	<b>BY</b>	Hansske et al., "Nucleic Acid Related Compounds. 43. A Convenient Procedure for the Synthesis of 2' and 3'-Ketonucleosides," <i>Tetra. Lett.</i> , 1983, 24(15), 1589-1592	
	<b>BZ</b>	Hegemann, L. et al., "Biochemical Pharmacology of Protein Kinase C and its Relevance for Dermatology", <i>Pharmacology of the Skin</i> , 1992, Ch. 22, CRC Press, Boca Raton, 357-368	
	<b>CA</b>	Himelstein, B. P. et al., "Metalloproteinases in Tumor Progression: The Contribution of MMP-9," <i>Invasion &amp; Metastasis</i> , 1994-95, 14, 246-258	
	<b>CB</b>	Ho, V.C. et al., "Treatment of severe lichen planus with cyclosporine", <i>J. Am. Acad. Dermatol.</i> , 1990, 22, 64-68	
	<b>CC</b>	Horton, N. C. et al., "The Structure of an RNA/DNA Hybrid: A Substrate of the Ribonuclease Activity of HIV-1 Reverse Transcriptase," <i>J. Mol. Biol.</i> , 1996, 264, 521-533	
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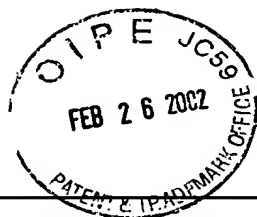
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	<b>CD</b>	Hua, J. et al., "Inhibition of Matrix Metalloproteinase 9 Expression by a Ribozyme Blocks Metastasis in a Rat Sarcoma Model System," <i>Cancer Res.</i> , <b>1996</b> , <i>56</i> , 5279-5284	
	<b>CE</b>	Hurtenbach, U. et al., "Prednisolone Reduces Experimental Arthritis and Inflammatory Tissue Destruction in Scid Mice Infected with <i>Borrelia Burgdorferi</i> ," <i>Int. J. Immunopharmac</i> , <b>1996</b> , <i>18</i> , 281-288	
	<b>CF</b>	Iribarren, A.M. et al., "Resistance to Degradation by Nucleases of (2'S)-2'-Deoxy-2'-C-methyloligonucleotides, Novel Potential Antisense Probes," <i>Antisense Res. Dev.</i> , <b>1994</b> , <i>4(2)</i> , 95-98	
	<b>CG</b>	Iyer, R.P. et al., "The Automated Synthesis of Sulfur-Containing Oligodeoxyribonucleotides Using 3H-1,2-Benzodithiol-3-one 1,1-Dioxide as a Sulfur-Transfer Reagent", <i>J. Org. Chem.</i> , <b>1990</b> , <i>55</i> , 4693-4699	
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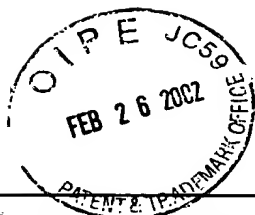
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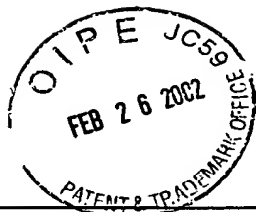
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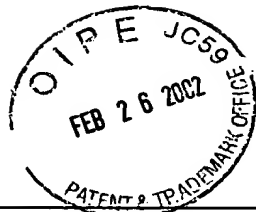
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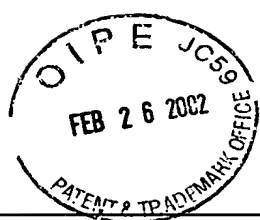
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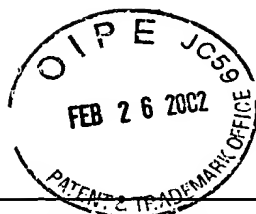
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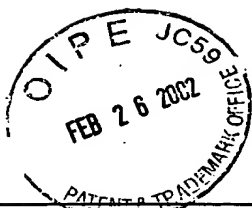




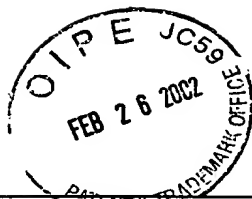
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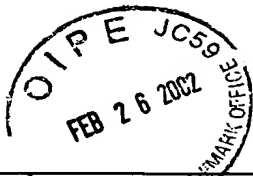
<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. <b>ISIS-4789</b>	Serial No. <b>09/970,971</b>
		Applicant <b>Manoharan et al.</b>	
		Filing Date <b>October 4, 2001</b>	Group <b>Not yet assigned</b>
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	<b>FH</b>	Gait, M.J. et al., <i>Oligonucleotide Synthesis A Practical Approach</i> , IRL Press, Washington, DC, <b>1984</b> , Table of Contents only	
	<b>FI</b>	Guschlbauer, W. et al., "Nucleoside conformation is Determined by the Electronegativity of the Sugar Substituent", <i>Nucl. Acis Res.</i> , <b>1980</b> , 8, 1421	
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	<b>FM</b>	Ikehara, M., "Purine 8-Cyclonucleosides", <i>Accounts Chem. Res.</i> , <b>1969</b> , 2, 47-53	
	<b>FN</b>	Ikehara et al., "Purine Cyclonucleosides-26 A Versatile Method for the Synthesis of Purine O-Cyclo-Nucleosides. The First Synthesis of 8,2'-Anhydro-8-Oxy 9-β-D-Arabinofuranosylguanine", <i>Tetrahedron</i> , <b>1975</b> , 31, 1369-1372	
	<b>FO</b>	Ikehara et al., "Polynucleotides. L. synthesis and properties of poly (2'chloro-2'-deoxyadenylic acid) and poly (2'-bromo-2'-deoxyadenylic acid)", <i>Nucl. Acids Res.</i> , <b>1977</b> , 4, 4249-4260	
	<b>FP</b>	Ikehara et al., "Studies of Nucleosides and Nucleotides-LXXXII. <sup>1)</sup> cyclonucleosides. (39). <sup>2)</sup> synthesis and properties of 2'halogen-2'-deoxyadenosines", <i>Chem. Pharm. Bull.</i> , <b>1978</b> , 26, 2449-2453	
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	<b>FR</b>	Ikehara et al., "Polynucleotides. LII.synthesis and properties of poly (2'-deox-2'-fluoroadenylic acid)", <i>Nucl. Acids Res.</i> , <b>1978</b> , 5, 1877-1887	
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		Applicant <b>Manoharan et al.</b>	
		Filing Date <b>October 4, 2001</b>	Group <b>Not yet assigned</b>
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	<b>GF</b>	Miller, P.S. et al., "A New Approach to Chemotherapy Based on Molecular Biology and Nucleic Acid Chemistry: Matagen (Masking Tape for Gene Expression)", <i>Anti-Cancer Drug Design</i> , <b>1987</b> , 2, 117-128	
	<b>GG</b>	Ohtsuka, M. et al., "Recognition by Restriction Endonuclease <i>EcoRI</i> of Deoxyoctanucleotides Containing Modified Sugar Moieties", <i>Eur. J. Biochem.</i> , <b>1984</b> , 139, 447-450	
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	<b>GI</b>	Ragathan, R., "Modification of the 2'-Position of Purine Nucleosides: Synthesis of 2'-a-Substituted-2'-Deoxyadenosine Analogs", <i>Tetra. Lett.</i> , <b>1977</b> , 15, 1291-1294	
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		Applicant <b>Manoharan et al.</b>	
		Filing Date <b>October 4, 2001</b>	Group <b>Not yet assigned</b>
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	<b>GP</b>	Uesugi, S. et al., "A Linear Relationship Between Electronegativity of 2'-Substituents and Conformation of Adenine Nucleosides," <i>Tetrahedron Letts.</i> , <b>1979</b> , 42, 4073-4076	
	<b>GQ</b>	Uesugi et al., "Improved Synthesis of 2'-Fluoro-2'-Deoxyadenosine and Synthesis and Carbon-13 NMR Spectrum of Its 3',5'-Cyclic Phosphate Derivative", <i>Nucleosides &amp; Nucleotides</i> , <b>1983</b> , 2, 373-385	
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	<b>GS</b>	Zon, G., "Oligonucleotide analogues as potential chemotherapeutic agents," <i>Pharmaceutical Res.</i> , <b>1988</b> , 5(9), 539-547	
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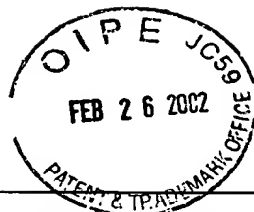
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	GW	3,687,808	08/29/72	Merigan et al.	195	28
	GX	4,689,320	08/25/87	Kaji	514	44
	GY	4,806,463	02/21/89	Goodchild et al.	435	5
	GZ	5,004,810	04/02/91	Draper	536	27
	HA	5,166,195	11/24/92	Ecker	514	44
	HB	5,194,428	03/16/93	Agrawal et al.	514	44
	HC	5,212,295	05/18/93	Cook	536	26.7
	HD	5,242,906	09/07/93	Pagano et al.	514	44
	HE	5,248,670	09/28/93	Draper et al.	514	44
	HF	5,442,049	08/15/95	Anderson et al.	536	24.5
	HG	5,457,189	10/10/95	Crooke et al.	536	24.5
	HH	5,514,577	05/07/96	Draper et al.	435	238
	HI	5,514,788	05/07/96	Bennett et al.	536	23.1
	HJ	5,523,389	06/04/96	Ecker et al.	536	23.1

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	HL	WO 94/08003	04/14/94	PCT		
	HM	WO 92/03568	03/05/92	PCT		

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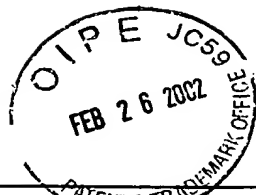
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Examiner Initial		Document No.	Date	Name	Class	Subclass
	HN	5,580,767	12/03/96	Cowsert et al.	435	172.3
	HO	5,582,972	12/10/96	Lima et al.	435	6
	HP	4,381,344	04/1983	Rideout et al.	435	87
	HQ	5,013,830	05/07/91	Ohtsuka et al.	536	27
	HR	5,134,066	07/28/92	Rogers et al.	435	91
	HS	5,212,295	05/18/93	Cook	536	26.7
	HT	5,214,135	05/25/93	Srivastava et al.	536	26.7
	HU	5,466,786	11/14/95	Buhr et al.	536	26.26
	HV	5,658,731	08/19/97	Sproat et al.	435	6
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	HZ	0 260 032	08/27/87	EP	X	
	IA	0 287 313	10/19/88	EP	X	
	IB	0 399 330	05/15/90	EP		X
	IC	0 417 999	03/10/91	EP	X	

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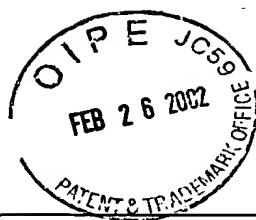
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	<b>ID</b>	5,245,022	09/14/93	Weis et al.	536	24
	<b>IE</b>	5,627,053	05/06/97	Usman et al.	435	91
	<b>IF</b>	5,639,647	06/17/97	Usman et al.	435	199
	<b>IG</b>	5,817,635	10/06/98	Eckstein et al.	514	44
	<b>IH</b>	5,859,221	01/12/99	Cook et al.	536	23

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	<b>IJ</b>	41 10085 A1	10/01/92	Germany		X
	<b>IK</b>	WO 90/15814	12/27/90	PCT	X	
	<b>IL</b>	WO 91/06556	05/16/91	PCT	X	
	<b>IM</b>	WO 91/15499	10/17/91	PCT		X
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	IT	5,591,623	01/07/97	Bennett et al.	435	240.2	
	IU	5,591,720	01/07/97	Anderson et al.	514	44	
	IV	5,607,923	03/04/97	Cook et al.	514	44	
	IW	5,620,963	04/15/97	Cook et al.	514	44	
	IX	5,639,649	06/17/97	Almond et al.	435	235.1	
	IY	5,658,891	08/19/97	Draper et al.	514	44	
	IZ	5,661,134	08/26/97	Cook et al.	514	44	
	JA	5,681,747	10/28/97	Boggs et al.	435	375	
	JB	5,681,944	10/28/97	Crooke et al.	536	24.5	
	JC	5,877,309	03/02/99	McKay et al.	536	24.5	
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	JE	5,955,443	09/21/99	Bennett et al.	514	44	
	JF	6,111,094	08/29/00	Bennett et al.	536	24.5	
	JG	5,334,711	08/02/94	Sproat, et al.	536	24.5	
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